

REMARKS

Claims 1-8 and 10-64 remain in the application for consideration. In view of the following remarks, Applicant respectfully requests withdrawal of the rejections and forwarding of the application onto issuance.

Request for Interview Before Issuance of an Office Action

Applicant is filing this response as an RCE and has been sincerely attempting to advance prosecution in this matter. In order to continue to do so, Applicant formally requests a telephone interview with the examiner and his supervisor *before the Office issues an Office Action responsive to this response*. Applicant will contact the examiner and the examiner's supervisor, within a few days of filing this response, to set up a mutually-convenient time for the interview.

§ 102 Rejections

Claims 1, 24-26, 37-39, 48-49, 54-59, and 62-64 stand rejected under 35 U.S.C. § 102(3) as being anticipated by U.S. Patent No. 6,581,062 to Draper et al (hereinafter "Draper").

§103 Rejections

Claims 2-8, 10-19, 27-28, 30-31, 40-43 and 60-61 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Draper in view of U.S. Patent No. 5,295,261 to Simonetti.

Claims 20-23, 29, 32-36, 44-47, and 50-53 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Draper in view of U.S. Patent No. 6,151,601 to Papierniak et al. (hereinafter "Papierniak").

Applicant's Disclosure

Applicant's disclosure notes that there is an unsolved need to be able to create context-aware computing in which computing devices can participate in their particular context. In specific circumstances, there are unsolved needs to provide relational position awareness among physical locations in both public and private views of the world.

Applicant's claimed subject matter relates to context aware computing systems and methods. In various embodiments, one or more hierarchical tree structures are defined that uniquely identify geographical divisions of the Earth and/or physical or logical entities. Each tree has multiple nodes and at least one node from each tree is linked. *Goods and services* can be associated with individual nodes on the tree such that the nodes provide a universal reference when attempting to locate or consume the *goods or services*. By knowing where a device is located within a hierarchical structure, in at least some embodiments, the applications can present *location-dependent goods or services* to the user. Thus, a user is able to actively participate in their current computing environment.

The Draper Reference

Draper's disclosure relates to a completely different subject matter – that is, the storage of data. Draper discloses a method and apparatus for storing semi-structured data in a structured manner. Semi-structured data might be XML encoded data, which is then stored in an SQL database, a form of structured data storage. Draper utilizes a mapper to generate a structured organization to store the collection of semi-structured data. The mapper further collaterally generates a

1 description of how the semi-structured data are stored under the structured
2 organization.

3 Draper's disclosure can perhaps best be understood by reference to FIGS.
4 2a, 2b, and 3. FIGS. 2a-2b illustrate an example of semi-structured data and its
5 logical representation. As illustrated, semi-structured data 54' includes a number of
6 entities or data elements, each delineated by a pair of tags, e.g. entity A by tags
7 <entity A> and </entity A>, entity B by tags <entity B> and </entity B>, and so
8 forth. Some entities, like entities F and H have multiple instantiations. The
9 entities/instantiations have an hierarchical relationship to each other; and may be
10 logically represented by tree structure 60, having corresponding number of nodes,
11 one for each entity/instantiation, and edges interconnecting the nodes whose
12 represented entities/instantiations are direct ancestors/descendants of each other,
13 as shown.

14 Draper's FIG. 3 illustrates a structured organization for storing the semi-
15 structured data of FIGS. 2a-2b. As illustrated, structured organization 52' includes
16 four relational tables 62-68. Table 62 includes one column each for storing
17 identifiers of entities A, B, C, D, E, and G, and data for entities C and D. Table 64
18 includes one column each for storing identifiers for entities E and F, and data for
19 entities F, whereas table 66 includes one column each for storing identifiers for
20 entities G and F, and data for entities F. Similarly, table 68 includes one column
21 each for storing identifiers for entities A, H and I, and data for entity I. The
22 organization of these relational tables is characterized by the fact that entities
23 having the possibility of multiple instantiations are stored in separate tables. The
24 approach is said to be a normalized organization of the relational tables.
25

1 Applicant respectfully submits that Draper's methods and systems for
2 storing data are in no way analogous to Applicant's claimed subject matter relating
3 to context-aware computing. In fact, Draper's disclosure seems to have no
4 relevance to context-aware computing at all. Furthermore, Draper does not
5 disclose or suggest any relationship between his methods of storing data and any
6 attempt to connect a user with *goods or services*.

8 Claims 1-23

9 **Claim 1** recites a system for determining context comprising [emphasis
10 added]:

- 11 • one or more computer-readable media; and
- 12 • a hierarchical tree structure resident on the media and comprising
13 multiple nodes each of which represent geographical divisions of the
14 Earth, individual nodes comprising an entity identification (EID) that
15 is unique to the node, EIDs serving as a *basis by which attributes*
16 *can be assigned to goods or services* associated with an individual
17 node, said multiple nodes comprising parent and children nodes, at
18 least some of the parent nodes and their associated children nodes
19 having EIDs that are unique for the associated node.

18 In making out the rejection of this claim, the Office argues that Draper
19 discloses EIDs serving as a basis by which attributes can be assigned to goods or
20 services associated with an individual node. The Office cites to column 5, lines
21 38-55, and column 6, lines 40-56, reproduced below, in support of its argument.

22 FIGS. 6a-6b illustrate an example semi-structured data 54" and its
23 logical representation. The example "directory" semi-structured data
24 54", delineated by the <directory> and </directory> tags 100 and
25 150, as illustrated in FIG. 6a, includes the entities "person", "name",
"first name", "last name", "home", "address", "line1", "city", "state",
"zip", "phone" (in the context of "home"), "work", and "phone" (in

the context of "work"), delineated by the respective tag pairs, i.e. 102 and 148, 104 and 128, and so forth. The example "directory" semi-structured data may be logically represented by tree structure 60' of FIG. 6b. Tree structure 60' includes root node "directory" 162, "person" node 164, "name" node 166, "first name" node 168, "last name" node 170, "home" node 172, "address" node 174, "line 1" node 176, "city" node 178, "state" node 180, "zip" node 182, "home phone" node 184, "work" node 186, and "work phone" node 188. Col. 5, lines 38-55.

FIG. 9 illustrates the operational flow of mapper 50 for generating semi-structured organization 54 for structured data 52. At 202, mapper 50 transforms structured data 52 adding corresponding companion columns to the tables to store entity identifiers for the stored entity data. In one embodiment, mapper 50 also adds corresponding columns to the tables to store a composite key formed with the access keys of the tables. For example, in a table, having two columns storing the last and first names of persons as accessing keys, a column is added to store a composite key formed with the last and first names of the persons. At 204, mapper 50 constructs a logical tree structure similar to the ones illustrated in FIG. 2b and 6b, based on the columns storing entity identifiers. At 206, mapper 50 creates meta table 56 as described earlier. At 208, mapper 50 generates semi-structured organization 54 using the generated logical tree structure. Col. 6, lines 40-56.

Applicant respectfully submits that there is nothing in these excerpts, or anywhere else in Draper, that discloses or even remotely suggests individual nodes comprising an entity identification (EID) that is unique to the node and which serves as a *basis by which attributes can be assigned to goods or services* associated with an individual node. As discussed above, Draper's disclosure deals with converting semi-structured data, such as XML encoded data, to structured data storage, such as an SQL database. Draper does not disclose or suggest matter in which EIDs serve as a *basis by which attributes can be assigned to goods or services* associated with an individual node.

1 In the Office's "Response to Arguments," the Office further argues that
2 Draper discloses "nodes may be stored data information associated with the entity
3 and its attributes (col. 5, lines 12-36), such as services, goods, *or locations*
4 (geographic locations): name, home, address, state, zip city (col. 5, lines 38-55 and
5 see fig. 6a and fig. 6b) (emphasis added)."

6 First, Applicant respectfully points out that the Office uses the phrase
7 "*services, goods, or locations*" while the claimed subject matter relates to
8 attributes that can be assigned to *goods or services* associated with an individual
9 node. Applicant agrees that Draper discloses a logical representation of semi-
10 structured data, including names, addresses, and phone numbers. However, the
11 fact that Draper discloses address data associated with a node does *not* teach or
12 suggest Applicant's claimed subject matter – namely, EIDs that serve as a basis by
13 which attributes can be assigned to *goods or services* associated with an individual
14 node. The Office is not free to impart characteristics to the cited references that
15 are clearly and simply not there.

16 Accordingly, for at least these reasons, this claim is allowable.

17 **Claims 2-8 and 10-23** depend from claim 1 and are allowable as depending
18 from an allowable base claim. These claims are also allowable for their own
19 recited features which, in combination with those recited in claim 1, are neither
20 disclosed nor suggested in the references of record, either singly or in combination
21 with one another. Given the allowability of these claims, the rejection of claims 2-
22 8 and 10-19 over the combination with Simonetti is not seen to add anything of
23 significance.

1 **Claims 24-36**

2 **Claim 24** recites a system for determining context comprising [emphasis
3 added]:

- 4
- 5 • one or more computer-readable media;
 - 6 • a first hierarchical tree structure having multiple nodes associated
7 with a first context;
 - 8 • at least one second hierarchical tree structure having multiple nodes
9 associated with a second context; and
 - 10 • at least one node from the at least one second hierarchical tree
11 structure being linked with one node on the first hierarchical tree
12 structure by a link that is configured to enable a complete context to
13 be derived from the first and second contexts, individual nodes
14 having unique IDs that can serve as a *basis by which attributes can
15 be assigned to goods or services*,
 - 16 • said multiple nodes comprising parent and children nodes, at least
17 some of the parent nodes and their associated children nodes having
18 IDs that are unique for the associated node.
- 19

20 In making out the rejection of this claim, the Office argues that Draper
21 discloses individual nodes having unique IDs that can serve as a basis by which
22 attributes can be assigned to goods or services. The Office again cites to column 5,
23 lines 38-55, and column 6, lines 40-56, reproduced above, in support of its
24 argument.

25 Applicant respectfully submits that there is nothing in these excerpts, or
anywhere else in Draper, that discloses or even suggests individual nodes having
unique IDs that can serve as a *basis by which attributes can be assigned to goods
or services*. Draper's disclosure deals with converting semi-structured data, such
as XML encoded data, to structured data storage, such as an SQL database. Draper
does not disclose or suggest matter in which unique IDs serve as a *basis by which
attributes can be assigned to goods or services*.

1 In the Office’s “Response to Arguments,” the Office further argues that
2 Draper discloses “nodes may be stored data information associated with the entity
3 and its attributes (col. 5, lines 12-36), such as services, goods, *or locations*
4 (geographic locations): name, home, address, state, zip city (col. 5, lines 38-55 and
5 see fig. 6a and fig. 6b) (emphasis added).”

6 First, Applicant respectfully points out that the Office uses the phrase
7 “*services, goods, or locations*” while the claimed subject matter relates to
8 attributes that can be assigned to *goods or services*. Applicant agrees that Draper
9 discloses a logical representation of semi-structured data, including names,
10 addresses, and phone numbers. However, the fact that Draper discloses address
11 data associated with a node does *not* even *remotely* teach or suggest Applicant’s
12 claimed subject matter – namely, individual nodes having unique IDs that can
13 serve as a basis by which attributes can be assigned to *goods or services*.

14 Accordingly, for at least these reasons, this claim is allowable.

15 **Claims 25-36** depend from claim 24 and are allowable as depending from
16 an allowable base claim. These claims are also allowable for their own recited
17 features which, in combination with those recited in claim 24, are neither disclosed
18 nor suggested in the references of record, either singly or in combination with one
19 another. In addition, given the allowability of these claims, the rejection of claims
20 27-28 and 30-31 over the combination with Simonetti, and claims 29 and 32-36
21 over the combination with Papierniak, is not seen to add anything of significance.

1 **Claims 37-47**

2 **Claim 37** recites a method of determining context comprising [emphasis
3 added]:

- 4 • accessing first and one or more second hierarchical tree structures
5 that are resident on one or more computer-readable media, each tree
6 structure having multiple nodes, the nodes of the first hierarchical
7 tree structure being associated with a first context, the nodes of the
8 one or more second hierarchical tree structures being associated with
9 a second context; and
10 • traversing multiple nodes of at least one of the tree structures to
11 derive a context, individual nodes having unique IDs that can serve
12 as a ***basis by which attributes can be assigned to goods or services***,
13 said multiple nodes comprising parent and children nodes, at least
14 some of the parent nodes and their associated children nodes having
15 IDs that are unique for the associated node.

16 In making out the rejection of this claim, the Office argues that Draper
17 discloses individual nodes having unique IDs that can serve as a basis by which
18 attributes can be assigned to goods or services. The Office apparently cites again
19 to column 5, lines 38-55, and column 6, lines 40-56, reproduced above, in support
20 of its argument.

21 Applicant respectfully submits that there is nothing in these excerpts, or
22 anywhere else in Draper, that discloses or even suggests individual nodes having
23 unique IDs that can serve as a ***basis by which attributes can be assigned to goods***
24 ***or services***. Draper's disclosure deals with converting semi-structured data, such
25 as XML encoded data, to structured data storage, such as an SQL database.

 In the Office's "Response to Arguments," the Office further argues that
Draper discloses "nodes may be stored data information associated with the entity
and its attributes (col. 5, lines 12-36), such as services, goods, ***or locations***

1 (geographic locations): name, home, address, state, zip city (col. 5, lines 38-55 and
2 see fig. 6a and fig. 6b) (emphasis added).”

3 First, Applicant respectfully points out that the Office uses the phrase
4 “*services, goods, or locations*” while the claimed subject matter relates to
5 attributes that can be assigned to *goods or services*. Applicant agrees that Draper
6 discloses a logical representation of semi-structured data, including names,
7 addresses, and phone numbers. However, the fact that Draper discloses address
8 data associated with a node does *not* even *remotely* teach or suggest Applicant’s
9 claimed subject matter – namely, individual nodes having unique IDs that can
10 serve as a basis by which attributes can be assigned to *goods or services*.

11 Accordingly, for at least these reasons, this claim is allowable.

12 **Claims 38-47** depend from claim 37 and are allowable as depending from
13 an allowable base claim. These claims are also allowable for their own recited
14 features which, in combination with those recited in claim 37, are neither disclosed
15 nor suggested in the references of record, either singly or in combination with one
16 another. In addition, given the allowability of these claims, the rejection of claims
17 40-43 over the combination with Simonetti, and claims 44-47 over the
18 combination with Papierniak, is not seen to add anything of significance.

19
20 **Claims 48-53**

21 **Claim 48** is directed to a computer-readable medium having instructions
22 that cause a computing device to [emphasis added]:

- 23
24
25
- access first and second hierarchical tree structures, each tree structure having multiple nodes, the nodes of the first hierarchical tree structure being associated with a first location context, the nodes

of the second hierarchical tree structure being associated with a second location context, at least one node of the second hierarchical tree structure being linked with a node of the first hierarchical tree structure; and

- traverse at least one node of each tree structure to derive a location context, at least one node in a traversal path that leads to a root node of the second hierarchical tree structure being linked with a node of the first hierarchical tree structure, individual nodes having unique IDs that can serve as a *basis by which attributes can be assigned to goods or services*, said multiple nodes comprising parent and children nodes, at least some of the parent nodes and their associated children nodes having IDs that are unique for the associated node.

In making out the rejection of this claim, the Office argues that Draper discloses individual nodes having unique IDs that can serve as a basis by which attributes can be assigned to goods or services. The Office apparently cites again to column 5, lines 38-55, and column 6, lines 40-56, reproduced above, in support of its argument.

Applicant respectfully submits that there is nothing in these excerpts, or anywhere else in Draper, that disclose or even suggest individual nodes having unique IDs that can serve as a *basis by which attributes can be assigned to goods or services*. Draper's disclosure deals with converting semi-structured data, such as XML encoded data, to structured data storage, such as an SQL database.

In the Office's "Response to Arguments," the Office further argues that Draper discloses "nodes may be stored data information associated with the entity and its attributes (col. 5, lines 12-36), such as services, goods, *or locations* (geographic locations): name, home, address, state, zip city (col. 5, lines 38-55 and see fig. 6a and fig. 6b) (emphasis added)."

First, Applicant respectfully points out that the Office uses the phrase "*services, goods, or locations*" while the claimed subject matter relates to

1 attributes that can be assigned to *goods or services*. Applicant agrees that Draper
2 discloses a logical representation of semi-structured data, including names,
3 addresses, and phone numbers. However, the fact that Draper discloses address
4 data associated with a node does *not* teach or suggest Applicant's claimed subject
5 matter – namely, individual nodes having unique IDs that can serve as a basis by
6 which attributes can be assigned to *goods or services*.

7 Accordingly, for at least these reasons, this claim is allowable.

8 **Claims 49-53** depend from claim 48 and are allowable as depending from
9 an allowable base claim. These claims are also allowable for their own recited
10 features which, in combination with those recited in claim 48, are neither disclosed
11 nor suggested in the references of record, either singly or in combination with one
12 another. In addition, given the allowability of these claims, the rejection of claims
13 50-53 over the combination with Papierniak is not seen to add anything of
14 significance.

15
16 **Claims 54-56**

17 **Claim 54** recites a method of *locating goods or services* comprising
18 [emphasis added]:

- 19
- 20 • defining a hierarchical tree structure comprising multiple nodes that
21 each can define a physical or logical entity, said multiple nodes
22 comprising parent and children nodes, at least some of the parent
23 nodes and their associated children nodes having IDs that are unique
24 for the associated node;
 - 25 • *associating one or more goods or services* with one or more of the
nodes; and
 - traversing one or more of the multiple nodes to *discover a good or
service*.

1
2 In making out the rejection of this claim, the Office argues that Draper
3 discloses associating one or more goods or services with one or more nodes and
4 traversing one or more of the multiple nodes to discover a good or service. The
5 Office cites to figure 2B, figure 5, figure 6B, and column 5, lines 1-12, reproduced
6 below, in support of its argument.

7 FIG. 5 illustrates the operation flow for mapper 50, in accordance
8 with one embodiment. In this embodiment, it is assumed that
9 structured organization 52 is generated in the normalized approach
10 described earlier, referencing FIG. 3, and meta-table 56' of FIG. 4 is
11 employed for description 56. As illustrated, at 82, mapper 50
12 traverses a logical representation of semi-structured data 54
13 assigning identifiers to all entities (and if applicable, their multiple
14 instantiations). At the same, mapper 50 also keeps track of all
15 entities with multiple instantiations, as well as setting the applicable
16 flags and recording the applicable annotations. At 84, mapper 50
17 selects the root node, creates a base table, and assigns a first column
18 of the base table for the root entity.

19 Applicant respectfully submits that there is nothing in this excerpt, the cited
20 figures, or anywhere else in Draper that discloses or even suggests *associating one*
21 *or more goods or services* with one or more nodes and traversing one or more of
22 the multiple nodes to *discover a good or service*. Draper's disclosure deals with
23 converting semi-structured data, such as XML encoded data, to structured data
24 storage, such as an SQL database, and does not disclose or suggest *associating*
25 *one or more goods or services* with one or more nodes and traversing one or more
of the multiple nodes to *discover a good or service*.

26 In the Office's "Response to Arguments," the Office further argues that
27 Draper discloses "nodes may be stored data information associated with the entity
28 and its attributes (col. 5, lines 12-36), such as services, goods, *or locations*

1 (geographic locations): name, home, address, state, zip city (col. 5, lines 38-55 and
2 see fig. 6a and fig. 6b) (emphasis added).”

3 First, Applicant respectfully points out that the Office uses the phrase
4 “*services, goods, or locations*” while Applicant claims a method of locating *goods*
5 *or services* comprising the act of associating one or more *goods or services* with
6 one or more nodes. Applicant agrees that Draper discloses a logical representation
7 of semi-structured data, including names, addresses, and phone numbers.
8 However, the fact that Draper discloses address data associated with a node does
9 *not* teach or suggest Applicant’s claimed subject matter. Applicant has reviewed
10 the reference and can find *no* mention of associating one or more *goods or*
11 *services* with one or more nodes as contemplated in this claim.

12 Accordingly, for at least these reasons, this claim is allowable.

13 **Claims 55-56** depend from claim 54 and are allowable as depending from
14 an allowable base claim. These claims are also allowable for their own recited
15 features which, in combination with those recited in claim 54, are neither disclosed
16 nor suggested in the references of record, either singly or in combination with one
17 another.

18
19 **Claim 57**

20 **Claim 57** is a computer-readable medium claim and is of comparable scope
21 to claim 54. Hence, for at least the reasons set forth with respect to claim 54 being
22 allowable, this claim is allowable. Accordingly, Applicant respectfully traverses
23 the Office’s rejection.

1 **Claims 58-60**

2 **Claim 58** recites a method of building context-aware data structures
3 [emphasis added]:

- 4
- 5 • receiving input from a source that specifies information pertaining to
6 physical and/or logical entities;
 - 7 • processing the information to define a hierarchical tree structure
8 having a context, the tree structure comprising multiple nodes each
9 of which represent a separate physical or logical entity, said multiple
10 nodes comprising parent and children nodes, at least some of the
11 parent nodes and their associated children nodes having IDs that are
12 unique for the associated node;
 - 13 • linking at least one of the multiple nodes to a node of another tree
14 structure having a context and multiple nodes that represent physical
15 and/or logical entities, individual nodes having unique IDs that can
16 serve as a ***basis by which attributes can be assigned to goods or***
17 ***services,***
 - 18 • the tree structures being configured for traversal in a manner that
19 enables context to be derived from one or more of the nodes.

20 In making out the rejection of this claim, the Office argues that Draper
21 discloses individual nodes having unique IDs that can serve as a basis by which
22 attributes can be assigned to goods or services. The Office cites to figure 2B,
23 figure 6B, column 5, lines 1-12, and column 4, lines 10-28 and 42-67, reproduced
24 below, in support of its argument.

25 Entity A is said to be the parent entity of entities B, E, G and H.
26 Entities B, E, G and H are said to be the children entities of entity A.
27 Similarly, entity B is said to be the parent entities for entities C and
28 D respectively, whereas entities E, G and the two instantiations of
29 entity H are the parent entities for the two instantiations of entity F,
30 and the two instantiations of entity I respectively. The two
31 instantiations of entity F, and the two instantiations of entity I are
32 said to be the children entities of E, G and the two instantiations of
33 entity H respectively. *Col. 4, lines 10-28.*

1 The approach is said to be a normalized organization of the
2 relational tables. FIG. 4 illustrates description of correspondence
3 between the semi-structured data and the generated structured
4 organization, in accordance with one embodiment. As illustrated,
5 description 56' is a meta-table having a number of row entries 72,
6 one for each pair of parent and child nodes. Meta-table 56' includes
7 seven columns 74a-74g, storing identifiers for the in-context, the
8 parent node, the child node, the out-context, the storage table, the
9 parent column and the child column. That is, columns 74a-74d track
10 the hierarchical information of semi-structured data 54, and columns
11 74e-74g track the storage location information of the structured
12 organization 52. Additionally, meta-table 56' includes a number of
13 miscellaneous columns (not shown) for storing various flags and
14 annotations. These miscellaneous flags and annotations include e.g.
15 a flag that distinguishes between an "element" versus an "attribute",
16 an annotation that denotes whether a child can occur more than once
17 with respect to a parent, another annotation that denotes whether the
18 child must occur at all. Each row entry 72 always contains
19 information in columns 74b-74c and 74e-74g. Row entries 72 for
20 parent-child pairs involving multiple instantiations also contain
21 information in the "context" columns 74a and 74d. Where
22 applicable, row entries 72 also include the aforementioned flags and
23 annotations. *Col. 4, lines 42-67.*

14
15 Applicant respectfully submits that there is nothing in these excerpts, or
16 anywhere else in Draper, that discloses or even suggests individual nodes having
17 unique IDs that can serve as a ***basis by which attributes can be assigned to goods***
18 ***or services***. Draper's disclosure deals with converting semi-structured data, such
19 as XML encoded data, to structured data storage, such as an SQL database, and
20 does not disclose or suggest individual nodes having unique IDs that can serve as a
21 ***basis by which attributes can be assigned to goods or services***.

22 In the Office's "Response to Arguments," the Office further argues that
23 Draper discloses "nodes may be stored data information associated with the entity
24 and its attributes (col. 5, lines 12-36), such as services, goods, ***or locations***
25

(geographic locations): name, home, address, state, zip city (col. 5, lines 38-55 and see fig. 6a and fig. 6b) (emphasis added).”

First, Applicant respectfully points out that the Office uses the phrase “*services, goods, or locations*” while the claimed subject matter relates to attributes that can be assigned to *goods or services*. Applicant agrees that Draper discloses a logical representation of semi-structured data, including names, addresses, and phone numbers. However, the fact that Draper discloses address data associated with a node does *not* teach or suggest Applicant’s claimed subject matter – namely, individual nodes having unique IDs that can serve as a basis by which attributes can be assigned to *goods or services*.

Accordingly, for at least these reasons, this claim is allowable.

Claims 59-60 depend from claim 58 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 58, are neither disclosed nor suggested in the references of record, either singly or in combination with one another. In addition, given the allowability of these claims, the rejection of claim 60 over the combination with Simonetti is not seen to add anything of significance.

Claim 61

Claim 61 recites a system for determining context comprising [emphasis added]:

- one or more computer-readable media; and
- a hierarchical tree structure resident on the media and comprising multiple nodes each of which represent geographical divisions of the Earth, individual nodes comprising an entity identification (EID) that

1 is unique to the node, EIDs serving as a *basis by which attributes*
2 *can be assigned to goods or services* associated with an individual
3 node, said multiple nodes comprising parent and children nodes, at
4 least some of the parent nodes and their associated children nodes
5 having EIDs that are unique for the associated node;

- wherein at least some of the nodes comprise a node selected from a
group of nodes comprising: political entities, natural entities,
infrastructure entities, and public places.

6 In making out the rejection of this claim, the Office argues that Draper
7 discloses EIDs serving as a basis by which attributes can be assigned to goods or
8 services associated with an individual node. The Office apparently cites to column
9 5, lines 38-55, and column 6, lines 40-56, reproduced above, in support of its
10 argument.

11 Applicant respectfully submits that there is nothing in these excerpts, or
12 anywhere else in Draper, that discloses or even suggests “individual nodes
13 comprising an entity identification (EID) that is unique to the node, EIDs serving
14 as a *basis by which attributes can be assigned to goods or services* associated
15 with an individual node.” Draper’s disclosure deals with converting semi-
16 structured data, such as XML encoded data, to structured data storage, such as an
17 SQL database, and does not disclose or suggest EIDs serving as a *basis by which*
18 *attributes can be assigned to goods or services* associated with an individual
19 node. Additionally, the secondary reference to Simonetti neither discloses nor
20 suggests the claimed subject matter.

21 In the Office’s “Response to Arguments,” the Office further argues that
22 Draper discloses “nodes may be stored data information associated with the entity
23 and its attributes (col. 5, lines 12-36), such as services, goods, *or locations*
24
25

1 (geographic locations): name, home, address, state, zip city (col. 5, lines 38-55 and
2 see fig. 6a and fig. 6b) (emphasis added).”

3 First, Applicant respectfully points out that the Office uses the phrase
4 “*services, goods, or locations*” while the claimed subject matter relates to
5 attributes that can be assigned to *goods or services* associated with an individual
6 node. Applicant agrees that Draper discloses a logical representation of semi-
7 structured data, including names, addresses, and phone numbers. However, the
8 fact that Draper discloses address data associated with a node does *not* teach or
9 suggest Applicant’s claimed subject matter – namely, EIDs that serve as a basis by
10 which attributes can be assigned to *goods or services* associated with an individual
11 node.

12 Accordingly, for at least these reasons, this claim is allowable.

13
14 **Claim 62**

15 **Claim 62** recites a system for determining context comprising [emphasis
16 added]:

- 17 • one or more computer-readable media;
- 18 • a first hierarchical tree structure having multiple nodes associated
19 with a first context;
- 20 • at least one second hierarchical tree structure having multiple nodes
21 associated with a second context; and
- 22 • at least one node from the at least one second hierarchical tree
23 structure being linked with one node on the first hierarchical tree
24 structure by a link that is configured to enable a complete context to
25 be derived from the first and second contexts, individual nodes
having unique IDs that can serve as a *basis by which attributes can
be assigned to goods or services*,
- said multiple nodes comprising parent and children nodes, at least
some of the parent nodes and their associated children nodes having
IDs that are unique for the associated node;

- wherein the nodes of the first hierarchical tree structure comprise geographical divisions of the Earth;
- wherein the first and the at least one second hierarchical tree structures comprise a plurality of attributes, one of which comprising information that pertains to the tree with which the node is associated.

In making out the rejection of this claim, the Office argues that Draper discloses individual nodes having unique IDs that can serve as a basis by which attributes can be assigned to goods or services. The Office again cites to figure 2B, figure 6B, column 5, lines 1-12, and column 4, lines 10-28 and 42-67, reproduced above, in support of its argument.

Applicant respectfully submits that there is nothing in these excerpts, or anywhere else in Draper, that discloses or even suggests individual nodes having unique IDs that can serve as a *basis by which attributes can be assigned to goods or services*. Draper's disclosure deals with converting semi-structured data, such as XML encoded data, to structured data storage, such as an SQL database, and does not disclose or suggest individual nodes having unique IDs that can serve as a *basis by which attributes can be assigned to goods or services*.

In the Office's "Response to Arguments," the Office further argues that Draper discloses "nodes may be stored data information associated with the entity and its attributes (col. 5, lines 12-36), such as services, goods, *or locations* (geographic locations): name, home, address, state, zip city (col. 5, lines 38-55 and see fig. 6a and fig. 6b) (emphasis added)."

First, Applicant respectfully points out that the Office uses the phrase "*services, goods, or locations*" while the claimed subject matter relates to attributes that can be assigned to *goods or services*. Applicant agrees that Draper

1 discloses a logical representation of semi-structured data, including names,
2 addresses, and phone numbers. However, the fact that Draper discloses address
3 data associated with a node does *not* teach or suggest Applicant's claimed subject
4 matter – namely, individual nodes having unique IDs that can serve as a basis by
5 which attributes can be assigned to *goods or services*.

6 Accordingly, for at least these reasons, this claim is allowable.

7
8 **Claim 63**

9 **Claim 63** recites a computer-implemented method of determining context
10 comprising [emphasis added]:

- 11
- 12 • accessing first and one or more second hierarchical tree structures
13 that are resident on one or more computer-readable media, each tree
14 structure having multiple nodes, the nodes of the first hierarchical
15 tree structure being associated with a first context, the nodes of the
16 one or more second hierarchical tree structures being associated with
17 a second context; and
 - 18 • traversing multiple nodes of at least one of the tree structures to
19 derive a context, individual nodes having unique IDs that can serve
20 as a *basis by which attributes can be assigned to goods or services*,
21 said multiple nodes comprising parent and children nodes, at least
22 some of the parent nodes and their associated children nodes having
23 IDs that are unique for the associated node;
 - 24 • wherein the nodes of the first hierarchical tree comprise
25 geographical divisions of the Earth; and
 - wherein the traversing comprises traversing at least one node on
each tree to derive the context.

22 In making out the rejection of this claim, the Office argues that Draper
23 discloses individual nodes having unique IDs that can serve as a basis by which
24 attributes can be assigned to goods or services. The Office cites to figure 2B,
25

1 figure 6B, column 5, lines 1-12, and column 4, lines 10-28 and 42-67, reproduced
2 above, in support of its argument.

3 Applicant respectfully submits that there is nothing in these excerpts, or
4 anywhere else in Draper, that discloses or even suggests individual nodes having
5 unique IDs that can serve as a *basis by which attributes can be assigned to goods*
6 *or services*. Draper's disclosure deals with converting semi-structured data, such
7 as XML encoded data, to structured data storage, such as an SQL database, and
8 does not disclose or suggest individual nodes having unique IDs that can serve as a
9 *basis by which attributes can be assigned to goods or services*.

10 In the Office's "Response to Arguments," the Office further argues that
11 Draper discloses "nodes may be stored data information associated with the entity
12 and its attributes (col. 5, lines 12-36), such as services, goods, *or locations*
13 (geographic locations): name, home, address, state, zip city (col. 5, lines 38-55 and
14 see fig. 6a and fig. 6b) (emphasis added)."

15 First, Applicant respectfully points out that the Office uses the phrase
16 "*services, goods, or locations*" while the claimed subject matter relates to
17 attributes that can be assigned to *goods or services*. Applicant agrees that Draper
18 discloses a logical representation of semi-structured data, including names,
19 addresses, and phone numbers. However, the fact that Draper discloses address
20 data associated with a node does *not* teach or suggest Applicant's claimed subject
21 matter – namely, individual nodes having unique IDs that can serve as a basis by
22 which attributes can be assigned to *goods or services*.

23 Accordingly, for at least these reasons, this claim is allowable.
24
25

1 **Claim 64**

2 **Claim 64** recites one or more computer-readable media having computer-
3 readable instructions thereon which, when executed by a handheld, mobile
4 computing device, cause the computing device to [emphasis added]:

- 5
- 6 • access first and second hierarchical tree structures, each tree
7 structure having multiple nodes, the nodes of the first hierarchical
8 tree structure being associated with a first location context, the nodes
9 of the second hierarchical tree structure being associated with a
10 second location context, at least one node of the second hierarchical
11 tree structure being linked with a node of the first hierarchical tree
12 structure; and
 - 13 • traverse at least one node of each tree structure to derive a location
14 context, at least one node in a traversal path that leads to a root node
15 of the second hierarchical tree structure being linked with a node of
16 the first hierarchical tree structure, individual nodes having unique
17 IDs that can serve as a *basis by which attributes can be assigned to
18 goods or services*, said multiple nodes comprising parent and
19 children nodes, at least some of the parent nodes and their associated
20 children nodes having IDs that are unique for the associated node.

21 In making out the rejection of this claim, the Office argues that Draper
22 discloses individual nodes having unique IDs that can serve as a *basis by which
23 attributes can be assigned to goods or services*. The Office again cites to figure
24 2B, figure 6B, column 5, lines 1-12, and column 4, lines 10-28 and 42-67,
25 reproduced above, in support of its argument.

Applicant respectfully submits that there is nothing in these excerpts, or
anywhere else in Draper, that discloses or even suggests individual nodes having
unique IDs that can serve as a *basis by which attributes can be assigned to goods
or services*. Draper's disclosure deals with converting semi-structured data, such
as XML encoded data, to structured data storage, such as an SQL database, and

1 does not disclose or suggest individual nodes having unique IDs that can serve as a
2 *basis by which attributes can be assigned to goods or services.*

3 In the Office's "Response to Arguments," the Office further argues that
4 Draper discloses "nodes may be stored data information associated with the entity
5 and its attributes (col. 5, lines 12-36), such as services, goods, *or locations*
6 (geographic locations): name, home, address, state, zip city (col. 5, lines 38-55 and
7 see fig. 6a and fig. 6b) (emphasis added)."

8 First, Applicant respectfully points out that the Office uses the phrase
9 "*services, goods, or locations*" while the claimed subject matter relates to
10 attributes that can be assigned to *goods or services*. Applicant agrees that Draper
11 discloses a logical representation of semi-structured data, including names,
12 addresses, and phone numbers. However, the fact that Draper discloses address
13 data associated with a node does *not* teach or suggest Applicant's claimed subject
14 matter – namely, individual nodes having unique IDs that can serve as a basis by
15 which attributes can be assigned to *goods or services*.

16 Accordingly, for at least these reasons, this claim is allowable.

17 18 Conclusion

19 Applicant submits that all of the claims are in condition for allowance.
20 Applicant has made a sincere attempt to advance prosecution in this matter. To
21 that end, Applicant formally requests an interview with the examiner and the
22 examiner's supervisor for the purpose of advancing prosecution in this matter and
23 overcoming the stalemate that the Office and Applicant have reached. Applicant
24 will contact the examiner and the examiner's supervisor within a few days of
25 filing this Response to set up an interview. Applicant respectfully requests that the

1 Office refrain from issuing an Office Action responsive to this response until such
2 interview is able to be conducted.

3
4 Respectfully Submitted,

5
6 Dated: 7/1/04

7 By: 

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